

AMENDMENTS TO THE CLAIMS

1-109. (Cancelled)

110. (New) A local area network comprising:
a plurality of local area network nodes;
a LAN switch; and
communication cabling connecting said plurality of nodes to said switch for providing data communication;
said LAN switch comprising:
coupler circuitry coupling power into the communication cabling substantially without interfering with data communication; and
a power management and control unit governing the supply of power to at least some of the plurality of local area network nodes via the communication cabling,
said power management and control unit being operative to interrogate at least one node to which it is intended to transmit power over the communication cabling in order to determine whether the node's characteristics allow it to receive power over the communication cabling.

111. (New) A local area network according to claim 110 wherein the interrogation of at least one node includes measuring the voltage across the communication cabling connected to a node which is being interrogated and determining whether the measured voltage exceeds a predetermined threshold.

112. (New) A local area network according to claim 111 wherein a node for which the measured voltage exceeds a predetermined threshold is marked as an external voltage fed node.

113. (New) A network according to claim 110 and wherein said power management and control unit is operative to set a level of current to be injected via the coupler

circuitry into a line to which a node being interrogated is connected.

114. (New) A network according to claim 113 in which the line interrogation process includes measuring the voltage across said line, after said level of current has been established in said line, thereby to obtain at least one voltage measurement.

115. (New) A network according to claim 114 wherein the voltage is measured at a plurality of predetermined programmable times.

116. (New) A network according to claim 115 wherein the voltage is measured at at least three predetermined times.

117. (New) A network according to claim 114 and also comprising determining the status of the node and of the line at least partly based on said at least one voltage measurement.

118. (New) A network according to claim 117 wherein said node status comprises an indication that the node is adapted to receive power over the local area network.

119. (New) A method for supplying power in a local area network comprising:
connecting a plurality of local area network nodes to a LAN switch using communication cabling;
providing data communication over said communication cabling;
interrogating at least one node of said plurality of nodes to which it is intended to supply power;
determining, based on said interrogating, whether the characteristics of said at least one node allow it to receive power over the communication cabling; and
transmitting power to said at least one node over said communication cabling, substantially without interfering with said data communication, based on the results of said determining.

120. (New) A method according to claim 119 wherein said interrogating comprises:

measuring the voltage across the communication cabling connected to said at least one node; and

determining whether said voltage exceeds a predetermined threshold.

121. (New) A method according to claim 120 and also comprising marking a node for which said voltage exceeds a predetermined threshold as an external voltage fed node.

122. (New) A method according to claim 119 and also comprising setting a level of current to be injected into a line to which a node being interrogated is connected.

123. (New) A method according to claim 122 and wherein said interrogating includes measuring the voltage across said line, after said level of current has been established in said line, thereby to obtain at least one voltage measurement.

124. (New) A method according to claim 123 also comprising measuring the voltage at a plurality of predetermined programmable times.

125. (New) A method according to claim 124 wherein the voltage is measured at at least three predetermined times.

126. (New) A method according to claim 123 and also comprising determining the status of the node and of the line at least partly based on said at least one voltage measurement.

127. (New) A method according to claim 126 and wherein said determining comprises providing an indication that the node is adapted to receive power over the local area network.